

REMARKS

The Office Action dated April 4, 2006, has been carefully considered. Claims 64-109 are currently pending. New Claims 83-109 have been added to further define the protection in which Applicants are entitled. Claims 1-63 have been canceled without prejudice or disclaimer of the subject matter contained therein. Applicants request that the Examiner consider the following remarks, and pass the application to allowance.

Section 103 Rejections:

Claims 64-68, 70-73, 77-80 and 82 were rejected under 35 U.S.C. 103(a) as being obvious over Fritz et al. (Science, 2000) (herein after Fritz) in view of Ellerbock et al. (U.S. Patent No. 6,204,920).

Claim 64 as amended recites a system for detecting target molecules in a sample, comprising: an assembly comprising: a silicon portion having an array of microsensors, wherein at least some of the microsensors are functionalized to deflect when exposed to target molecules; and a glass portion, the silicon portion and the glass portion forming an individual fluid cell for each of the microsensors; a single optical beam source configured to simultaneously direct an optical beam onto each of the microsensors in the array of microsensors; and an optical detector array configured to simultaneously detect the position of each of the microsensors. (Emphasis added).

Fritz relates to a report on the specific transduction, via surface stress changes, of DNA hybridization and receptor-ligand binding into a direct nanomechanical response of microfabricated cantilevers. Meanwhile, Ellerbock relates to an optical fiber sensing system.

Fritz et al., however, does not teach or suggest an individual fluid cell for each of the microsensors. Rather, Fritz states that "[h]ybridization experiments were performed in a liquid cell containing a silicon cantilever array immersed in hybrid buffer (Fig. 1) (13)." Page 316, middle column, 2nd paragraph. Accordingly, Claim 64 should be allowable. Claims 65-68, 70-73, 77-80 and 82 are dependent from Claim 64 and should also be allowable for the reasons set forth above.

Claim 69 was rejected under 35 U.S.C. 103(a) as being obvious over Fritz et. al. (Science, 2000) in view of Ellerbock et al. (U.S. Patent No. 6,204,920) as applied to Claims 64-65 and 67 above, and further in view of Glezer et al. (US 2004/0189311).

Glezer et al. relates to assay modules, preferably assay cartridges, which are described as reader apparatuses which may be used to control aspects of module operation.

Claim 69, which is dependent from Claim 64, should be allowable for the reasons set forth above.

Claim 74 was rejected under 35 U.S.C. 103(a) as being obvious over Fritz et. al. (Science, 2000) in view of Ellerbock et al. (U.S. Patent No. 6,204,920) as applied to Claim 64 above, and further in view of Park et al. (U.S. Patent No. 5,448,399).

Park et al. relates to an optical system for a scanning probe microscope provides both an optical on-axis view and an optical oblique view of the sample by means of two optical paths each providing an image to a CCD camera via an auto-zoom lens.

Claim 74, which is dependent from Claim 64, should be allowable for the reasons set forth above.

Claim 75 was rejected under 35 U.S.C. 103(a) as being obvious over Fritz et. al. (Science, 2000) in view of Ellerbock et al. (U.S. Patent No. 6,204,920) as applied to Claim 64 above, and further in view of Quate et al. (U.S. Patent No. 6,203,983).

Quate et al. relates to an optical system for a scanning probe microscope provides both an optical on-axis view and an optical oblique view of the sample by means of two optical paths each providing an image to a CCD camera via an auto-zoom lens.

Claim 75, which is dependent from Claim 64, should be allowable for the reasons set forth above.

Claims 76 and 81 were rejected under 35 U.S.C. 103(a) as being obvious over Fritz et. al. (Science, 2000) in view of Ellerbock et al. (U.S. Patent No. 6,204,920) as applied to Claim 64 above, and further in view of Lee et al. (U.S. Patent No. 5,807,758).

Lee relates to a chemical and biological sensor using an ultra-sensitive force transducer.

Claims 76 and 81, which are dependent from Claim 64, should be allowable for the reasons set forth above.

New Claims 83-109:

New Claims 83-91 are dependent from Claim 64 and for the reasons set forth above, should be allowable.

Claim 92 recites a system for detecting target molecules in a sample, comprising: an array of microsensors, each microsensor having an individual microfluid reservoir, and wherein at least some of the microsensors are functionalized to deflect when exposed to a target molecule; an optical beam source configured to simultaneously direct an optical beam onto each of the microsensors in the array of microsensors; and an optical detector array configured to simultaneously detect the position of each of the microsensors. (Emphasis added). Claims 93-109 are dependent from Claim 92.

As set forth above, since none of the cited references, including Fritz et al. teach or suggest an array of microsensors, each microsensor having an individual microfluid reservoir, and wherein at least some of the microsensors are functionalized to deflect when exposed to a target molecule, Claims 92-109, should be allowable.


Conclusion:

For the reasons presented above, all claims are believed to be in condition for allowance. A Notice of Allowance is therefore respectfully requested.

Should the Examiner feel that a telephone conference would advance prosecution of the present application, he is invited to call the undersigned attorney at the number listed below.

Respectfully submitted,
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